

**CLAIMS**

1       An optical holographic device for recording data bits in a holographic medium (106),  
said device comprising a light modulator (103) with addressable elements (301), each having  
5       an area and at least one optically active sub-area (302) smaller than said area, means for  
directing a radiation beam towards said light modulator to form an encoded radiation beam so  
as to record at least first and second data bits (401, 402) in said holographic medium, means  
(200) for displacing said encoded radiation beam with respect to the holographic medium and  
means for controlling said displacing means so as to record a third data bit (403) between  
10       said first and second data bits.

2       An optical holographic device as claimed in claim 1, wherein said active sub-area is at  
least two times smaller than said area.

3       An optical holographic device as claimed in claim 1, wherein said displacing means  
comprise an electrowetting based deflection device or a liquid crystal based deflection  
15       device.

4       A method for recording data bits in a holographic medium, said method comprising a  
step of recording at least first and second data bits by means of an encoded radiation beam,  
and a step of displacing the encoded radiation beam so as to record a third data bit between  
said first and second data bits.

5       A method for recording data bits as claimed in claim 4, wherein said first data bit has  
a size in a direction and the encoded radiation beam is displaced in said direction over a  
distance that is smaller than said size.

6       A computer program comprising a set of instructions which, when loaded into a  
processor or a computer, causes the processor or the computer to carry out the method as  
25       claimed in Claim 4.